INTEGRATIVE STUDIES IN BIOLOGICAL SCIENCE ISB

College of Natural Science

200. History of Life
Fall, Spring, Summer. 3(3-0)
P: MTH 103 or MTH 110 or MTH 116 or MTH 120 or concurrently or designated score on mathematics placement test.
Life from its origin to the dawn of human history. Living things as both the products of evolutionary processes and as a major force driving evolution and altering the environment of planet earth.

202. Applications of Environmental and Organismal Biology
Fall, Spring, Summer. 3(3-0)
P: MTH 103 or MTH 110 or MTH 116 or MTH 120 or concurrently or designated score on mathematics placement test.
Historical and recent development of ideas about behavior, ecological, and evolutionary processes. Critical evaluation of the use and misuse of human understanding of nature, emphasizing recent findings.

202L. Applications of Environmental and Organismal Biology Laboratory
Fall, Spring, Summer. 1 credit.
C: ISB 202 concurrently.
Problem solving activities based on observation and the analysis of empirically derived data from environmental and organismal biology.

204. Applications of Biomedical Sciences
Fall, Spring, Summer. 3(3-0)
P: MTH 103 or MTH 110 or MTH 116 or MTH 120 or concurrently or designated score on mathematics placement test.
Historical and recent development of knowledge about cellular developmental or genetic processes. Critical evaluation of the use and misuse of scientific discoveries in these areas.

204L. Applications of Biomedical Science Laboratory
Fall, Spring, Summer. 1 credit.
C: ISB 204 concurrently.
Problem solving activities based on observation and interpretation of selected biological systems in relation to medical science.

206H. Human Biology and Society
Fall, Spring. 3(3-0)
P: MTH 103 or MTH 110 or MTH 116 or MTH 120 or concurrently or designated score on mathematics placement test.
Conceptual and technological advances in biology. Ethical, legal, social and economic issues which accompany these advances.

INTEGRATIVE STUDIES IN PHYSICAL SCIENCE ISP

College of Natural Science

201. Concepts of Reality through Physical Science
Fall, Spring, Summer. 3(3-0)
P: MTH 110 or MTH 116 or MTH 120 or MTH 124 or MTH 201 or STT 200 or STT 201 or concurrently or designated score on mathematics placement test.
Historical and recent development of our understanding of the physical world. Selected topics from the physical sciences, their relationship to one another and to other areas of culture.

201L. Concepts of Reality through Physical Science Laboratory
Fall, Spring, Summer. 1 credit.
C: ISP 201 concurrently.
Problem solving activities based on observation and interpretation of selected physical systems.

203. Geology of the Human Environment
Fall, Spring, Summer. 3(3-0)
P: MTH 110 or MTH 116 or MTH 120 or MTH 124 or MTH 201 or STT 200 or STT 201 or concurrently or designated score on mathematics placement test.
The scientific method in geological studies: its impact on the human environment and history, and on cultural, social, philosophical, and political decisions.

203L. Geology of the Human Environment Laboratory
Fall, Spring, Summer. 1 credit.
C: ISP 203 concurrently.
Exercises in the scientific method applied to earth materials and their impact on society.

205. Visions of the Universe
Fall, Spring, Summer. 3(3-0)
P: MTH 104 or MTH 110 or MTH 116 or MTH 120 or MTH 124 or MTH 201 or STT 200 or STT 201 or concurrently or designated score on mathematics placement
Role of observation, theory, philosophy, and technology in the development of the modern conception of the universe. The Copernican Revolution. Birth and death of stars. Spaceship Earth. Cosmology and time.

205L. Visions of the Universe Laboratory
Fall, Spring, Summer. 1 credit.
C: ISP 205 concurrently.
Observations of the sky, laboratory experiments, and computer simulations exploring the development of the modern conception of the universe.

207. World of Chemistry
Fall, Spring, Summer. 3(3-0)
P: MTH 110 or MTH 116 or MTH 120 or MTH 124 or MTH 201 or STT 200 or STT 201 or concurrently or designated score on mathematics placement test.
The language, concepts, models and techniques of chemical science, including atomic theory; nuclear energy; acids; chemicals in air, water, food and biological systems.

207L. World of Chemistry Laboratory
Fall, Spring, Summer. 1 credit.
C: ISP 207 concurrently.
Chemical combinations and reactivity with respect to such materials as acids, bases, dyes, foods, and detergents.

209. The Mystery of the Physical World
Fall, Spring, Summer. 3(3-0)
P: MTH 110 or MTH 116 or MTH 120 or MTH 124 or MTH 201 or STT 200 or STT 201 or concurrently or designated score on mathematics placement test.
Laws of physics through demonstrations and analyses of every day phenomena. Optics, mechanical systems and electromagnetic phenomena.

209L. The Mystery of the Physical World Laboratory
Fall, Spring, Summer. 1 credit.
C: ISP 209 concurrently.
Physical phenomena: optics, mechanical systems and electromagnetics.

211. Guide to the Atom
Fall, Spring, Summer. 3(3-0)
P: MTH 110 or MTH 116 or MTH 120 or MTH 124 or MTH 201 or STT 200 or STT 201 or concurrently or designated score on mathematics placement test.
Historical and recent development of knowledge about and models of the fundamental structures of all matter. Physical laws governing the structure of matter.

INTEGRATIVE STUDIES IN SOCIAL, BEHAVIORAL AND ECONOMIC SCIENCES ISS

College of Social Science

210. Society and the Individual (D)
Fall, Spring, Summer. 4(4-0)
Evolution of human behavior with an emphasis on the individual and society. Family and kinship, social organizations. Societal types, personality, and the life cycle.

215. Social Differentiation and Inequality (D)
Fall, Spring, Summer. 4(4-0)
Types, causes and consequences of stratification in human societies. Age, class, gender, race and other factors which define social position. Education, occupation, political economy.

220. Time, Space and Change in Human Society (D)
Fall, Spring, Summer. 4(4-0)
Evolutionary, ecological, and spatial theories of adaptation and change. Cultural evolution from prehistoric foraging to the post-industrial age. Continuity and change in the emergence and development of contemporary ways of life.

225. Power, Authority, and Exchange (D)
Fall, Spring, Summer. 4(4-0)
Power, authority, and exchange in organizing societies. Costs and limitations of power. Institutionalization of authority. Systems of exchange: planned vs. market economies.

310. People and Environment (I)
Fall, Spring, Summer. 4(4-0)
P: One 200-level ISS course.
Contemporary issues related to the interaction of socio-cultural and ecological systems. Global, regional, national and local environmental problems and responses.

315. Global Diversity and Interdependence (I)
Fall, Spring, Summer. 4(4-0)
P: One 200-level ISS course.
Contemporary issues in global political economy. Social forces and competing ideologies in a world context. Global resource distribution and development strategies. National identities and transnational linkages. First and Third Wor ld dichotomies.

320. World Urban Systems (I)
Fall, Spring, Summer. 4(4-0)
P: One 200-level ISS course.
Patterns of urbanization in various areas of the world over time. Linkage within and between urban centers. Economic, political and social/behavioral accommodation and adaptation to urban growth and change.

325. War and Revolution (I)
Fall, Spring, Summer. 4(4-0)
P: One 200-level ISS course.
Social conflict, wars and revolutions. Patterns of individual and collective action. Violence and conflict resolution.

330A. Africa: Social Science Perspectives (I)
Fall, Spring, Summer. 4(4-0)
P: One 200-level ISS course.
Comparative study of geography, cultures, politics, and economies of Africa. Diversity and change.

330B. Asia: Social Science Perspectives (I)
Fall, Spring, Summer. 4(4-0)
P: One 200-level ISS course.
Comparative study of geography, cultures, politics, and economies of Asia. Diversity and change.

330C. Latin America: Social Science Perspectives (I)
Fall, Spring, Summer. 4(4-0)
P: One 200-level ISS course.
Comparative study of geography, cultures, politics, and economies of Latin America. Diversity and change.

335. National Diversity and Change: United States (N)
Fall, Spring, Summer. 4(4-0)
P: One 200-level ISS course.
Racial, ethnic, class, gender, and other forms of diversity in the United States. Systems of dominant-minority relations and forms of prejudice and discrimination. Scope of and responses to group inequalities.
SA: ISS 335A

336. Canada: Social Science Perspectives (I)
Spring. 4(4-0)
P: One 200-level ISS course.
Canadian political, economic, and social institutions. Ethnic and other forms of diversity in Canada. North American national comparisons.
SA: ISS 335B

INTERNAL MEDICINE IM

Department of Internal Medicine
College of Osteopathic Medicine

590. Special Problems in Internal Medicine
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 48 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine. Approval of department.
Students work under faculty direction on an experimental, theoretical, or applied problem.

618. Clinical Tropical Medicine
Fall. 2(2-0)
R: Approval of department.
Selected topics such as African AIDS, malaria, onchocerciasis, tuberculosis, and schistosomiasis. Pathophysiology, treatments, epidemiology, current research, and controversies.
SA: CMS 618

620. Directed Studies
Fall, Spring, Summer. 1 to 30 credits. A student may earn a maximum of 48 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Individual or group work on special problems in medicine related to internal medicine.

621. Clinical Tropical Medicine Clerkship
Spring. 1 to 20 credits. A student may earn a maximum of 20 credits in all enrollments for this course.
P: IM 618. R: Open only to graduate-professional students in the colleges of Osteopathic and Human Medicine in final year.
Supervised clinical experiences in a large African teaching hospital and its outpatient clinics; students must spend at least six weeks on site. Small group discussions led by MSU faculty.
SA: CMS 621

650. Medicine Clerkship
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 20 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Clinical exposure in osteopathic medicine. Program developed to achieve proficiency in motor skills and aptitudes; comprehension of concepts and principles; patient evaluation; diagnosis; management; therapy.

651. Cardiology Clerkship
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Intensive experience in bedside diagnosis and care of patients with the more frequently seen cardiac problems.

652. Gastroenterology Clerkship
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Inpatient and outpatient clinical gastroenterology. GI diseases. Patient evaluation and management. Behavioral science and patient care.

653. Oncology and Hematology Clerkship
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Diagnosis, staging, and treatment methods of solid tumors and other neoplasms. Pharmacology of cytotoxic agents. Issues in nutrition. Behavioral approaches to the terminally ill patient.

654. Pulmonary Disease Clerkship
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Evaluation and treatment of patients with common pulmonary diseases including acute and chronic respiratory failure, primary and metastatic lung tumors, various bacterial and non-bacterial pneumonias.

655. Nephrology Clerkship
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Clinic and hospital based experience to develop basic skills in evaluation and management of patients with renal disease. Integration of renal physiology and pathophysiology.

656. Neurology Clerkship
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Clinical exposure in neurology. Program structure developed to achieve proficiency in motor skills, aptitudes; comprehension of concepts and principles; patient evaluation, diagnosis, management, and therapy.

657. Emergency Medicine Clerkship
Fall, Spring, Summer. 1 to 20 credits. A student may earn a maximum of 30 credits in all enrollments for this course.
R: Open only to graduate-professional students in the College of Osteopathic Medicine upon completion of Units I and II.
Acute evaluation and management of patients in the hospital emergency room and other locations.

ITALIAN ITL

Department of Romance and Classical Languages
College of Arts and Letters

101. Elementary Italian I
Fall, Spring. 4(4-1)
P: No previous experience in Italian or approval of department.
Practice in using and understanding Italian to develop listening, speaking, reading, and writing skills. Pronunciation, grammar, vocabulary, and cultural topics.

102. Elementary Italian II
Fall, Spring. 4(4-1)
P: ITL 101 or approval of department.
Further practice in using and understanding Italian to develop listening, speaking, reading, and writing skills. Pronunciation grammar, vocabulary, and cultural topics.

201. Second-Year Italian I
Fall. 4(4-0)
P: ITL 102 or approval of department.
Intermediate-level review and development of aural comprehension, speaking, reading, and writing skills. Topics in Italian culture.

202. Second-Year Italian II
Spring. 4(4-0)
P: ITL 201.
Further review and development of aural comprehension, speaking, reading, and writing skills. Topics in Italian culture.

290. Independent Study
Fall, Spring. 1 to 4 credits. A student may earn a maximum of 4 credits in all enrollments for this course.
R: Approval of department.
Special projects arranged by an individual student and a faculty member in areas supplementing regular course offerings.

320. Advanced Grammar and Composition
Fall. 3(3-0)
P: ITL 202.
Composition in a variety of styles and modes. Review of grammar. Extensive practice in writing.

330. Italian Culture and Civilization
Spring. 3(3-0)
P: ITL 202.
Diverse aspects of political, social, economic, intellectual, artistic, and literary life of Italy. Class discussion in Italian of readings, films, television programs, and musical selections.

340. Phonetics and History of the Italian Language
Spring of odd-numbered years. 3(3-0)
P: ITL 330.
Phonetic description of the sound system to improve pronunciation and spoken Italian. Historical, linguistic, and cultural issues which influenced the development of modern Italian.